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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,607	08/16/2006	Hitoshi Matsubara	47233-5006 (230336)	2679

55694 7590 08/15/2011
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EXAMINER

SCHMIDTMANN, BAHAR

ART UNIT	PAPER NUMBER
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1623

NOTIFICATION DATE	DELIVERY MODE
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08/15/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

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DETAILED ACTION

This Office Action is in response to Applicant's proposed amendment and response after FINAL filed 29 July 2011. The proposed amendment After Final will be entered as discussed further below.

5. ***Withdrawn Rejections***

Applicant's amendment, filed 29 July 2011, with respect to the rejection of claims 29, 32, 33 and 51 under 35 U.S.C. § 112, second paragraph, for indefiniteness, has been fully considered and is persuasive. The claim has been amended to delete the recitation "filled with the activated charcoal". As a result, it is clear that it is the aqueous extract of tea leaves that is provided in an amount at least 3 times greater than the capacity of the column. The claim as amended more specifically claims the subject matter disclosed and supported in Applicant's Specification.

The rejection is hereby **withdrawn**.

7. Applicant's proposed amendment deleting the recitation "filled with the activated charcoal", is entered because the amendments relates to matters of form and because the added language was already present in the claims and thus presents no additional search burden.

11. ***Response to Arguments - Claim Rejections***

Applicant's argument filed 29 July 2011, with respect to the rejection of claims 28-33, 51 and 52 under 35 U.S.C. §103(a) as being unpatentable over Seto et al. in view of Green et al., have been fully considered but they are not persuasive.

A. Applicant contends that the Final Office Action does not justify that a skilled artisan would have been motivated to combine Seto and Green. Specifically, Applicant has argued that a tea extract differs from green coffee beans or coffee bean extract at least regarding the composition. Applicant contends that the two references are directed towards using different methods and materials to obtain different products, and solve different problems. Namely, Applicant contends that there is no guidance provided by either reference to produce a composition rich of polymerized catechins from a tea extract by having both non-polymerized catechins and caffeine selectively removed. And that an obviousness analysis may not be made based on picking and choosing all the options between the references. Applicant argues that there is no evidence on the record or adduced by the Office that a skilled artisan would have had "some apparent reason to apply Green's methods...on Seto's tea extract...let alone that such modification(s) would have worked".

The above argument is not found persuasive. As discussed in the obviousness rational, both Seto et al. and Green et al. are directed towards the process of removing caffeine from naturally occurring food ingredients that are well known to be used in producing beverages. Although tea leaves and coffee beans have different components, they both have caffeine. The skilled artisan looking to remove caffeine

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would have looked to the references since they both teach utilizing liquid extraction procedures at high temperatures and adsorbents that selectively remove the caffeine ingredient. Because of the similarities in the procedure, and because the physical properties of caffeine do not change based on its source, there would have been a reasonable expectation of success in removing caffeine found in the tea of Seto's reference, by applying Green's methodology. Thus, the skilled artisan would not have randomly selected variables in the references to modify. Because it was well known that the adsorbent can selectively remove the caffeine component, one having ordinary skill in the art would have been motivated to utilize the activated carbon taught in Green to Seto's process. Additionally, both references are directed at providing a hot liquid extract. Green specifically teaches that at 60 °C to 90 °C, caffeine can successfully be extracted. Thus, the skilled artisan would have been motivated to provide a hot tea extract that reaches this temperature to remove caffeine. To summarize, the two references are directed towards providing beverages with little to no caffeine.

According to MPEP 2111.02, the claim preamble does not necessarily have patentable weight. The recitation "producing a composition from an aqueous liquid containing polymerized catechins and non-polymerized catechins extracted from tea", requires a tea extract having polymerized catechins and non-polymerized catechins. Although Seto et al. does not expressly disclose this, the polymerized and non-polymerized catechins are inherently present in the tea extract. The tea leaves used in Seto et al., i.e. oolong tea, are the same as instantly claimed (see instant claims 31, 51 and 52) and is inherently a partially-fermented tea (as evidenced by Nadine Taylor, The

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Green Tea Library, "Green, Black or Oolong?", cited in PTO-892). According to MPEP 2112, "There is no requirement that a person of ordinary skill in the art would have recognized the inherent disclosure at the time of invention, but only that the subject matter is in fact inherent in the prior art reference. *Schering Corp. v. Geneva Pharm. Inc.*, 339 F.3d 1373, 1377, 67 USPQ2d 1664, 1668 (Fed. Cir. 2003)". The question then is, would it have been obvious to a person having ordinary skill at the time the invention was made, to contact an oolong tea extract with an activated charcoal at a temperature of at least 50 °C. The answer is yes, for the reasons discussed above and in the obviousness rational. Because it would have been obvious to perform this active step, the product would necessarily result in a composition which has a higher ratio of the polymerized catechins to the non-polymerized catechins. Please see MPEP 2111.04.

It is noted that Applicant has provided a contradictory argument on p.9 of the remarks submitted 29 July 2011. It is reproduced below:

The Office discounts the unexpected results, alleging that "[s]electively removing non-polymerized catechins is the intended result of the positively recited steps and do not have patentable weight." Office Action, page 8. Applicants disagree. Selective removal of non-polymerized catechins and caffeine (*i.e.*, "wherein the composition has a higher ratio of the polymerized catechins to the non-polymerized catechins") is actually one of the properties of the resulting product by practicing the presently claimed methods.

Applicant appears to be *admitting* that the selective removal of non-polyemrized catechins and caffeine which give a composition having a higher ratio of the polymerized catechins to the non-polymerized catechins is a property of the resulting

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product by practicing the presently claimed methods. Whether Applicant calls it "an intended result" or admits it is a "property", the fact is, this limitation is produced by performing the positively recited step. And as discussed above and in the obviousness rejection, the steps as instantly recited are *prima facie* obvious. According to MPEP 2145, section II: "Mere recognition of latent properties in the prior art does not render nonobvious an otherwise known invention. In re Wiseman, 596 F.2d 1019, 201 USPQ 658 (CCPA 1979)".

B. Applicant contends that the claimed methods offer unexpected advantages. Applicant has argued that the presently claimed methods result in a composition rich in *polymerized* catechins that have various beneficial effects like having a more desirable taste than non-polymerized catechins. Applicant has argued that non-polymerized catechins are oxidized to polymerized catechins during the fermentation process and that Seto's tea polyphenols refer to non-polymerized catechins because the green tea is non-fermented tea.

With respect to the difference between Seto's non-fermented tea and Applicant's "fermented tea", it is noted that the source of the tea leaves as instantly claimed is identical with that of Seto et al., i.e. oolong tea. And as evidenced by Nadine Taylor (cited above), oolong tea is in fact a partially fermented tea that comprises both catechins (i.e. "non-polymerized catechins") and polymerized catechins like theaflavins and thearubigens. Additionally, according to MPEP 2145, "arguments of counsel cannot take the place of factually supported objective evidence. See, e.g., In re Huang,

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100 F.3d 135, 139-40, 40 USPQ2d 1685, 1689 (Fed. Cir. 1996); In re De Blauwe, 736 F.2d 699, 705, 222 USPQ 191, 196 (Fed. Cir. 1984).”. Currently, there is no evidence of record to show that an oolong tea extract taught by Seto et al. does not inherently comprise polymerized and non-polymerized catechins. On the other hand, Nadine Taylor is cited as evidence that the oolong tea of Seto et al. does inherently comprise polymerized and non-polymerized catechins at the start of the extraction procedure.

There is also no evidence of record to show that performing the process with oolong tea taught by Seto et al. does not provide a composition having a higher ratio of polymerized catechins to the non-polymerized catechins and/or that the method as instantly claimed is actually “unexpectedly advantageous” over the prior art.

C. Applicant has argued that in view of Suehiro et al., a person having ordinary skill in the art would have avoided eluting tea extracts at high temperature since Suehiro suggests caffeine is eluted from the column at a higher temperature.

As discussed before, Suehiro et al. is not cited in the obviousness rejection. However, Applicant’s arguments are still not found persuasive. Even if Suehiro et al. suggested that caffeine can be eluted from a column packed with a ***vinyl polymer gel-type synthetic adsorbent*** at a temperature of 90 °C, the skilled artisan would have known from Green et al. that caffeine will remain absorbed to ***activated carbon*** at a temperature of 60 °C to 90 °C. Because the physical properties of caffeine are expected to be identical regardless of where it came from, there is a reasonable expectation of success in using the activated carbon of Green with the process taught

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by Seto et al. to selectively adsorb caffeine and produce a final product having little to no caffeine.

The rejection is hereby **maintained**.

The rejections of record in the Final Office Action dated 18 May 2011 are maintained, as indicated above, in the view of the proposed amendment After Final entered and in view of Applicant's arguments not persuasive to overcome all rejections of record.

Conclusion

In view of the rejections to the pending claims set forth above, no claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BAHAR SCHMIDTMANN whose telephone number is (571)270-1326. The examiner can normally be reached on Mon-Thurs 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shaojia Anna Jiang can be reached on 571-272-0627. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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